

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-15. (canceled)

16. (previously presented) In a communication system supporting mobile IP, wherein a mobile node is operable to connect to a network infrastructure via one or more gateway routers, a method comprising the mobile node performing steps of:

determining that it is attached to a mobile gateway router associated with a mobile network; and

maintaining a binding update list of one or more correspondent nodes that the mobile node has been communicating with,

wherein the mobile node maintains the binding update list when the mobile node is in a home network of the mobile node.

Claims 17-18. (canceled)

19. (original) The method of claim 16, wherein the mobile node comprises a mobile router.

20. (original) The method of claim 16, wherein the mobile node comprises a mobile network node detached from a mobile network.

Claims 21-23. (canceled)

24. (previously presented) The method of claim 38 wherein the care of address comprises at least one of a home address of a) the mobile gateway router and b) the mobile node.

25. (previously presented) The method of claim 38 wherein the care of address comprises an address in a home subnet of the mobile node.

26. (previously presented) The method of claim 16 wherein the mobile node comprises an IP-addressable device.

27. (previously presented) The method of claim 16, further comprising sending a binding update to the one or more correspondent nodes.

28. (previously presented) The method of claim 27 wherein the binding update is generated in response to a tunneled packet from at least one of a) the one or more correspondent nodes, b) the mobile gateway router, and c) a home agent of the mobile node.

29. (previously presented) The method of claim 16 further comprising identifying that a packet was received from the one or more correspondent nodes without traversing the home agent.

30. (previously presented) The method of claim 16, further comprising:
detaching from the mobile gateway router;
attaching to a second mobile gateway router in a fixed site in the communication system;
and
sending a binding update to the one or more correspondent nodes that the mobile node has been communicating with to inform the one or more correspondent nodes of the mobile node's attachment to the fixed site.

31. (previously presented) The method of claim 38 wherein the binding update is sent to the one or more correspondent nodes identified in the binding update list.

32. (previously presented) The method of claim 31 wherein the binding update comprises a care of address in a subnet that the mobile node is currently attached to.

33. (previously presented) The method of claim 31 wherein the binding update comprises a care of address of a home address of the mobile gateway router to which the mobile is attached.

34. (previously presented) The method of claim 16, further comprising:
detaching from the mobile gateway router;
attaching to a second mobile gateway router in a second mobile network in the communication system; and
sending a binding update to the one or more correspondent nodes that the mobile node has been communicating with to inform the one or more correspondent nodes of the mobile node's attachment to the second mobile network.

35. (previously presented) The method of claim 34 wherein the binding update is sent to the one or more correspondent nodes identified in the binding update list.

36. (previously presented) The method of claim 35 wherein the binding update comprises a care of address in a subnet that the mobile node is currently attached to.

37. (previously presented) The method of claim 35 wherein the binding update comprises a care of address of a home address of the mobile gateway router to which the mobile is attached.

38. (currently amended) The method of claim 16 further comprising the steps of
when the mobile node has moved away from the home network:
obtaining a care of address comprising the home address of the mobile gateway router;
and
sending the care-of address to a home agent of the mobile node, ~~and~~

39. (previously presented) The method of claim 38, further comprising sending a binding update to the one or more correspondent nodes.

40. (previously presented) The method of claim 39 wherein the binding update is generated in response to a tunneled packet from at least one of a) the one or more correspondent nodes, b) the mobile gateway router, and c) a home agent of the mobile node.